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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/732,786	12/11/2000	Yasushi Ichikawa	Q62216	2733

7590

08/10/2004

SUGHRUE, MION, ZINN, MACPEAK & SEAS  
2100 Pennsylvania Avenue, N.W.  
Washington, DC 20037-3202

EXAMINER
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DUONG, THANH P

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 08/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/732,786

Applicant(s)

ICHIKAWA ET AL.

Examiner

Tom P Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 16-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

1. Claims 1, 5-7, 9-10, and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Sullivan (5,779,561). Sullivan discloses a golf ball composition comprising the inner cover layer 14 blended with at least one part (Col. 7, lines 61-63) of 20 mesh (micron) silicone fillers (Col. 9, lines 9-20) in coupling agents or silanes resin (Col. 8, lines 26-31) and blended with resins

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(Col. 11, lines 1-20). Note, the silicone fillers coated with a coupling agents such as silane (silicone resin (Col. 8, lines 26-31) constitutes a composite powder.

2. Claims 1-2, 5-12, 17-18, and 20 are rejected under 35 U.S.C. 102(a, e) as being anticipated by Sullivan (6,204,331). Regarding claims 1, 2, 9 and 17, Sullivan discloses a golf ball composition comprising interior layers blended with at least one part (Table 11) of finely divided silicone fillers, coated with primers such as silicate esters, silicone pastes, silicone resins or reactive silanes (See Col. 29, lines 15-18 and Abstract), with "dimethyl" functional group (Col. 21, lines 58-60), and ionomeric resin (Col. 2, lines 1-5 and Col. 3, lines 50-52) with Shore D hardness (Table 1) of 66-68. Note, the silicone elastomers are reinforced by a finely divided material such as a silica constitutes a composite powder.

Regarding claims 5, 18, and 20, Sullivan shows the particle size within the range of 0.5 to 50  $\mu\text{m}$  and a particle size distribution ranging from 0.1 to 100  $\mu\text{m}$ . (See Col. 24, Table 11). Regarding claims 6, Sullivan does not disclose the amount of blended silicone in the composition. Ueshima et al. teaches that the amount of polydimethylsiloxane added is 0.01 – 10 parts by weight which is equivalent to 0.01 – 10% by weight. It would have been obvious in one of ordinary skill in the art at the time of the invention to include the silicone rubber/resin/composite of Sullivan to have 0.01-10% polydimethylsiloxane by weight in the blended composition to provide excellent moldability, resilience, and flight performance. Regarding claim 7, Ueshima teaches that the particles are spherical. (See Col. 6, line 23). The Applicant should also note that a change in the shape in the shape

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of a prior art device is a design consideration within the skill of the art. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966). Regarding 8, Sullivan discloses the silicone elastomers comprise cross-linked polydimethylsiloxanes (Col. 21, lines 57-60). Sullivan does not disclose the exact composition methylphenylpolysiloxane but Sullivan discloses the properties of polydimethylsiloxanes are typically modified by substitution of methyl groups on the silicone atom by hydrogen, alkyl, phenyl, or organofunctional group. Regarding claim 10, Sullivan discloses various ionomer resins and the rest of the compositions, as claimed by the Applicant, are cited throughout his patent application. Regarding claim 11, Sullivan discloses that ethylene ionomer resin with a metal salt of an unsaturated carboxylic acid such as acrylic acid, methacrylic acid or maleic acid, which could be neutralized with a metal ions such as sodium or zinc (Col. 2, lines 1-5). Regarding claim 12, Sullivan shows the ethylene acrylic acid copolymers with a Shore D hardness of 40-50 with a 20% acid content by weight (see Col. 11, Table 1).

3. Claims 16 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakahira (4,429,068). Nakahira discloses the core of a golf ball (Col. 5, line 36) with at least one resin of urethane rubber (Col. 6, line 37) blended with a silicone rubber powder (Col. 6, lines 40-41).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan '331 in view of Ueshima et al. (5,502,095). Regarding claims 3 and 4, Sullivan '331 does not disclose expressly the type of silicone rubber powder in the claimed invention. Ueshima et al. discloses the thermoplastic elastomer composition consist of component (C), polyorganosiloxane. Polyorganosiloxane is blended with resin or rubber or filler such as a silicone rubber powder. (Col. 6, line 61-65). Ueshima further teaches that this blended composition can be used as an elemental material for sport and leisure goods (e.g. golf club grip, baseball ball bat grip, swimming and etc.) and other rubber contacts (Col. 11, lines 40-45). The use of such polyorganosiloxane improves material properties such as fatigue resistance, abrasion resistance, and flexibility (Col. 11, lines 25-27). Ueshima et al. discloses the thermoplastic elastomer composition consist of component (C), polyorganosiloxane. Polyorganosiloxane is blended with resin or rubber or filler such as a silicone rubber powder. (Col. 6, line 61-65). Thus, it would have been obvious in view of Ueshima to one having ordinary skill in the art to modify the silicone cover of Sullivan with polyorganosiloxane as taught by Ueshima in order to gain the above benefits. Regarding claim 4, it is conventional to use such

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commercially available silicone resin powder and it would have been obvious to use such silicone here to improve hardness and durability. Furthermore, Applicant has not disclosed the advantage and/or criticality of using the siloxane having such functional group; thus, it appears the material selection is an obvious matter of design choice. Thus, it appears the silicone resin powder of above applied references provide a golf ball with the same performance as the claimed invention.

5. Claims 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan '331 in view of Ueshima et al. (5,502,095). Sullivan discloses a golf ball with a core made of ionomers (Col. 36, lines 15-17) containing at least a silicone materials (Col. 3, lines 27-30). Sullivan fails to disclose the core is blended with a silicone resin powder. Takemura teaches silicone rubber powder (Col. 2, lines 48-55) can be dispersed in the core formulation (Col. 2, lines 6-17) provides a golf ball with high rebound characteristic and soft feel. Thus, it would have been obvious in view of Takemura to one having ordinary skill in the art to modify the core formulation of Sullivan with a silicone resin powder as taught by Takemura in order to gain the above benefits.

### ***Response to Arguments***

Applicant's arguments with respect to claims 1-12 and 16-20 have been considered but are moot in view of the new ground(s) of rejection.

***Terminal Disclaimer***

The terminal disclaimer filed on 6/17/04 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on Application Number 10/326,118 has been reviewed and is accepted. The terminal disclaimer has been recorded.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Duong  
July 27, 2004

TD



Glenn Caldarola  
Supervisory Patent Examiner  
Technology Center 1700